UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

CERTIFIED MAIL - P 060 304 367

Gerald D. Rosebery, Ph.D.
Remedy Intelligence Staffing
1954 Dairy Road
Melbourne, FL 32904

SUBJECT: Case 4026, AI 024002, Copper 8-Quinolinolate
Environmental Fate Waiver Requests

Dear Dr. Rosebery:

This letter addresses the waiver requests by La Quinoleine, S.A. for environmental fate data requirements GDLNs 161-3, 162-2, 162-3, 162-4, 164-1, 165-4 and 168-1-SS.

GDLNS 161-3, Photodegradation in Soil; 162-2, Anaerobic Soil Metabolism; 162-3, Anaerobic Aquatic Metabolism; 162-4, Aerobic Aquatic Metabolism; 163-1, Adsorption/Desorption; 164-1, Soil Dissipation, and 165-4, Accumulation in Fish

The waiver request for GDLNs 161-3, 162-2, 162-3, 162-4, 163-1, 164-1, and 165-4 was requested because environmental exposure are "incidental and non-deliberate" with wood preservative uses, the major use (microbicide on fabric, paper, adhesives) is classified as an indoor use pattern, and the availability is expected to be low [8-hydroxyquinoline solubility < 100 μg/L].

You have submitted the necessary environmental fate data for GDLNs 161-1, Hydrolysis; 161-2, Photodegradation in Water; 162-1, Aerobic Soil Metabolism; and 163-1 Leaching in Unaged and Aged Soil Columns to support a qualitative environmental fate assessment for wood preservative uses of copper 8-hydroxyquinoline. A quantitative fate assessment would require availability data to assess environmental concentrations of copper 8-hydroxyquinoline at the interface of treated surfaces and matrices. Therefore, your waivers for GDLNs 161-3, 162-2, 162-3, 162-4, 163-1, 164-1 and 165-4 are granted.

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GDLN 168-1-SS Availability Study

A waiver was also requested for the Availability Study, GDLN 168-1-SS, for copper 8-hydroxyquinoline. This waiver was requested because La Quinoleine indicates the maximum concentration of 8-hydroxyquinoline in leachate solution would exceed the solubility of 8-hydroxyquinoline (<0.2 mg/L). Estimated concentrations in leachate solution is based on complete leaching from a 442.4cm^3 block of wood treated with 0.141 grams of 8-hydroxyquinoline in 5 liters of leachate. You submitted solubility data for copper 8-hydroxyquinoline. The reported solubility of 8-hydroxyquinoline is 0.103 μg/L in pH 5 buffer solution, 0.068 μg/L in pH 7 buffer solution, 0.068 μg/L in pH 9 buffer solution, 90 μg/ml in methanol, and 0.01 μg/L in hexane. Your calculation on copper 8-hydroxyquinoline concentrations in leachate solutions is based on 100% leaching from the treated wood surface. If this situation is expected then it may be reasonable to approximate the environmental availability of copper 8-hydroxyquinoline using solubility. However, the availability study should be designed to assess release rates in 0.1 N HCl, distilled water, pH 5, 7, and 9 buffered solutions. The release rate may actually control the environmental availability. Therefore, the waiver request for GDLN 168-1-SS is denied.

The availability study to assess the release rate of copper 8-hydroxyquinolate from treated wood surfaces must be conducted. The current due date of this requirement is October 26, 1994. However, due to our delay in responding to your waiver, we grant you an extension of 9 months to complete the study. The new due date is May 31, 1995. The study must be submitted on time or the appropriate regulatory action may be taken.

If you have any questions concerning this letter, please contact Kathleen Depukat at 703-308-8587.

Sincerely yours,

Jay S. Ellenberger, Chief
Accelerated Reregistration Branch
Special Review and
Reregistration Division

cc: James Hetrick, EFED
Cynthia Giles-Parker, RD

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